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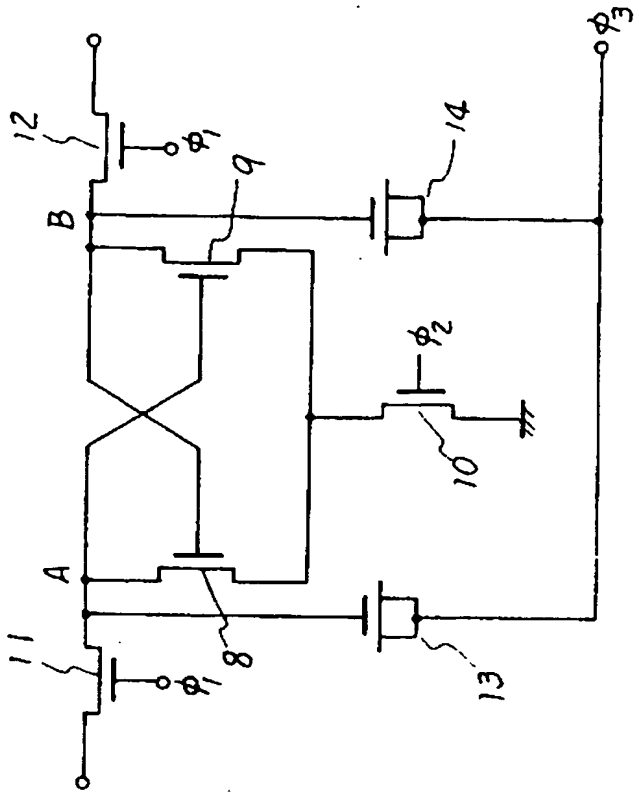
TITLE : DETECTING AND AMPLIFYING CIRCUIT



ABSTRACT : PURPOSE: To make the operation at a low input voltage and a low power consumption possible, by providing an integrated capacity consisting of a pair of MOS transistors which have gates connected to cross connection point of flip flops, and short-circuited between sources and drains and connected to a clock signal source.

CONSTITUTION: When the voltage at a point A in the high voltage side is higher than a threshold voltage, an MOS transistor TR13 is inverted, and the capacity becomes proportional to the gate area. A TR14 which has the gate connected to a point B in the low voltage side is not inverted because the gate voltage is the earth potential, and no capacity is formed between the gate and the source and between the gate and the drain. When a clock φ_3 is applied under this state, the side at the point A where the capacity is formed is boosted, and the side at the point B is not boosted. Since the gate of a TR8 which has the drain connected to the point A is in the earth potential, the electric charge at the point A is not discharged. Consequenctly, a logic circuit in the next stage is driven easily even with a low voltage input. Further, since the low voltage side is not boosted, a wasteful power consumption is prevented.